




## Features

- Size: 8 mm diameter, 10 mm length
- High current rating
- Low capacitance and insertion loss
- Fail-short option available
- RoHS compliant\*
-  UL Recognized

## Applications

- Telecommunications equipment
- Industrial equipment/electronics
- Consumer electronics

# 2046 Series Heavy-Duty 3-Electrode Gas Discharge Tube

## Characteristics

Test Methods per ITU-T K.12 and IEC 61643-311.

Characteristic	Model No.				
	2046-09	2046-14	2046-20	2046-23	2046-25
DC Sparkover $\pm 20\%$ @ 100 V/s	90 V	145 V	200 V	230 V	250 V
Impulse Sparkover <sup>(1)</sup>					
100 V/ $\mu$ s	< 600 V	< 500 V	< 500 V	< 600 V	< 600 V
1000 V/ $\mu$ s	< 700 V	< 700 V	< 700 V	< 700 V	< 700 V

Characteristic	Model No.				
	2046-35	2046-40	2046-42	2046-47	2046-60
DC Sparkover $\pm 20\%$ @ 100 V/s	350 V	400 V	420 V	470 V	600 V
Impulse Sparkover <sup>(1)</sup>					
100 V/ $\mu$ s	< 700 V	< 800 V	< 800 V	< 900 V	< 1000 V
1000 V/ $\mu$ s	< 800 V	< 900 V	< 900 V	< 1000 V	< 1100 V

<sup>(1)</sup> Impulse Sparkover voltage is defined as typical values of distribution.

Insulation Resistance (IR) <sup>(2)</sup> .....	50 / 100 / 250 Vdc .....	> 10 G $\Omega$
Glow Voltage .....	10 mA .....	~ 70 V
Arc Voltage .....	1 A .....	~ 10 V
Glow-Arc Transition Current .....	.....	< 1 A
Maximum Capacitance .....	1 MHz .....	< 2 pF
Maximum Impulse Discharge Current .....	20,000 A, 8/20 $\mu$ s .....	1 operation
	10,000 A, 8/20 $\mu$ s .....	10 operations
Nominal Alternating Discharge Current .....	20 A, 50 Hz, 1 second .....	1 operation
Impulse Life .....	200 A 10/1000 $\mu$ s .....	130 operations
DC Holdover Voltage <sup>(3)</sup> .....	.....	< 150 ms
Operating Temperature .....	.....	-30 to +85 °C
Storage Temperature .....	.....	-40 to +115 °C
Climatic Category (IEC 60068-1) .....	.....	40 / 90 / 21

### Notes:

- UL Recognized component, UL File E153537.
- At delivery AQL 0.65, level II DIN ISO 2859
- Line to Line voltage is approximately 1.8 to 2 times the stated Line to Ground voltage.
- Discharge current rating is total current equally divided between Each Line To Ground (ELTG).

<sup>(2)</sup> DC Sparkover Voltage	IR Measuring Voltage
90 V	50 V
145–400 V	100 V
420–600 V	250 V

<sup>(3)</sup> Network Applied	
DC Sparkover Voltage	DC Holdover Voltage
90–145 V	52 V
200–250 V	135 V
350–600 V	150 V



**WARNING Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

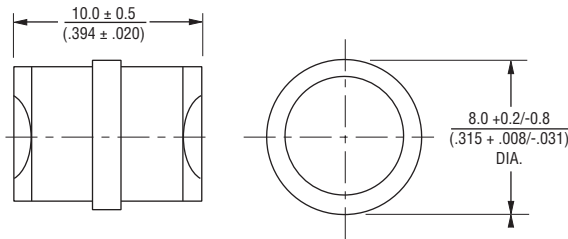
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# 2046 Series Heavy-Duty 3-Electrode Gas Discharge Tube

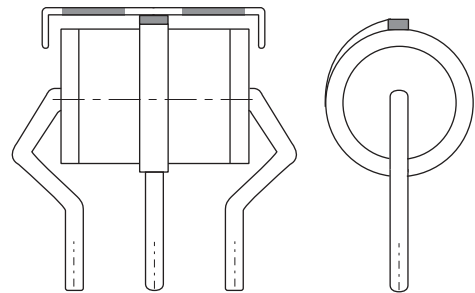
**BOURNS®**

## Product Dimensions

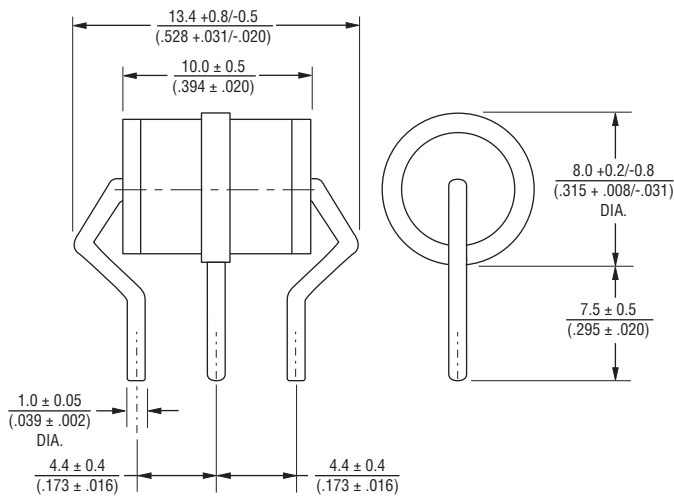
**2046-xx-A**



**2046-xx-C2F  
FAIL-SHORT CONFIGURATION**



**2046-xx-C2  
1.0 mm dia. lead wire**



DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

## How to Order

**2046 - xx - xx (F) LF**

Model Number Designator

Voltage (Divided by 10)

09 = 90 V	35 = 350 V
14 = 145 V	40 = 400 V
20 = 200 V	42 = 420 V
23 = 230 V	47 = 470 V
25 = 250 V	60 = 600 V

Leads

- A = No leads/Cassette Applications
- C2 = 1.0 mm dia., 4.4 mm spacing

Fail-Short Option

- (Blank) = None
- F = Fail-Short Device (Optional)

RoHS Compliancy

- LF = RoHS Compliant Product

## Packaging Specifications

Model 2046 ships standard bulk pack, 100 pieces per tray; 5 trays per inner box; 2 inner boxes per outer pack (1K units).

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REV. B 09/19

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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